



# iSens Duo

ATEX dual wireless detector  
for flammable and toxic  
gases with LoRa, LoRaWAN  
and LTE technology

## 01 PRODUCT DESCRIPTION

The iSens Duo can use a wide range of sensor types to achieve diverse configurations, allowing simultaneous transmission of readings from up to five gases. This transmission can be done either to the GasVisor control panel for fast and accurate measurement of all types of gases, or to cloud software via a LoRaWAN connection. Among these sensors, you can choose electrochemical sensors for oxygen and toxic gases, MPS and infrared sensors for flammable gases, and infrared sensors for CO2.

The iSens Duo is designed for easy installation, requiring only placement at the measurement point, as it has an internal battery for continuous use for two years. An iSens Duo network can be connected to a GasVisor LoRa control panel, which will monitor the status of each detector to indicate alarm conditions and sensor status, with a wide variety of controls, indicators, and options. The devices can also be connected via LoRaWAN to the Sensotrak platform.

The transmission distance via LoRa and LoRaWAN reaches up to 7 km (Line of Sight). In urban or industrial environments, this distance will be significantly reduced depending on the obstacles between the transmitter and receiver. A distance of 1 km is highly likely in typical environments. In case of signal loss or low battery, the control unit detects the issue and alerts the user.

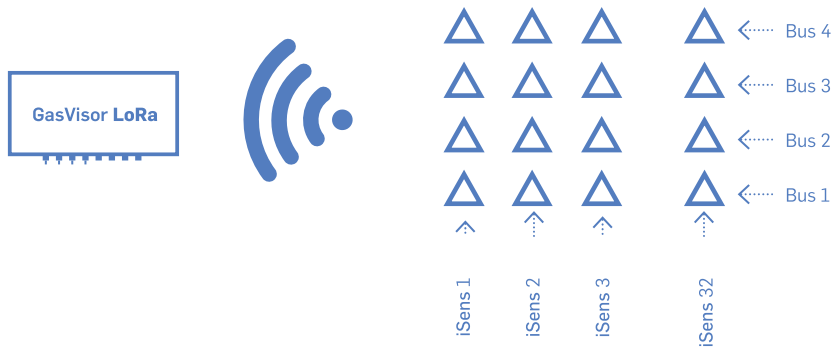
## 02 TECHNICAL FEATURES

MPS sensor	Up to 2 sensors simultaneously	Plug and Play
Wireless communication	Configuration via NFC App	Single-man calibration
2-year battery lifetime	Suitable for Hazardous Areas	ATEX certified

## 03 TECHNICAL SPECIFICATIONS

<b>Sensors</b>	Electrochemical, infrared, PID
<b>Communication</b>	Bidirectional LoRa - 7 Km Maximum distance LoS - 1 Km typical distance LoRaWAN - 3 Km Maximum distance LoS - 1 Km typical distance Optional NB-IoT - LTE
<b>Power supply</b>	Li-SOCl2 3.6 V battery. 24-month autonomy. Optional power adapter
<b>Data transmission</b>	LoRa Modem - GasVisor NB-IoT or LoRa WAN Modem - MQTT or HTTP messages to cloud Software
<b>Protection</b>	IP-65
<b>Calibration</b>	Zero & Span calibration with NFC and Android App
<b>Weight</b>	450 gr
<b>Dimensions</b>	121 mm x 121 mm x 76 mm
<b>Temperature</b>	-20 °C to + 50 °C
<b>Humidity</b>	0 to 95% RH
<b>Certification</b>	ATEX II 2G Ex eb IIC T4 Gb (Pending)
<b>Compliant with</b>	EN 60079-0:2015; EN 60079-11:2015; EN 50270;

## 04 INSTALLATION MAP



## 05 AVAILABLE SENSORS

Gas	Rango	Sensor
O <sub>2</sub>	0 – 30% vol.	Electrochemical
CO	0 – 1.000 ppm	Electrochemical
H <sub>2</sub> S	0–100 ppm	Electrochemical
NO	0–250 ppm	Electrochemical
NO <sub>2</sub>	0–20 ppm	Electrochemical
Cl <sub>2</sub>	0 – 10 ppm	Electrochemical
SO <sub>2</sub>	0 – 5,00 ppm	Electrochemical
NH <sub>3</sub> (standard range)	0 – 300 ppm	Electrochemical
NH <sub>3</sub> (high range)	0 – 1.000 ppm	Electrochemical
LII (IR)	0 – 100% L.I.E	Infrared
CO <sub>2</sub>	0 – 10.000 ppm	Infrared
CO <sub>2</sub>	0 – 50.000 ppm	Infrared
CO <sub>2</sub>	0 – 100% vol.	Infrared
PH <sub>3</sub>	0 – 20 ppm	Electrochemical
H <sub>2</sub> S (high range)	0 – 2.000 ppm	Electrochemical
L.I.E. (MPS)	0 – 100% L.I.E.	MPS
ETO	0 – 10 ppm	Electrochemical
HCN	0 – 50 ppm	Electrochemical
HF	0 – 10 ppm	Electrochemical
H <sub>2</sub>	0 – 2.000 ppm	Electrochemical
O <sub>3</sub>	0 – 10 ppm	Electrochemical
HCl	0 – 50 ppm	Electrochemical
HCHO	0 – 10 ppm	Electrochemical
CH <sub>3</sub> SH	0 – 10 ppm	Electrochemical
C <sub>2</sub> H <sub>3</sub> Cl	0 – 20 ppm	Electrochemical
COCl <sub>2</sub>	0 – 1,00 ppm	Electrochemical